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APPLICANT(S): GINZBURG, Boris et al.  
SERIAL NO.: 10/705,983  
FILED: November 13, 2003  
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### AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1. (Currently Amended) An apparatus comprising:  
    a fractional N synthesizer to provide first phase-locked loop to set a first frequency  
    of a first output signal of a first voltage-controlled oscillator ; and  
    an integer divider synthesizer a second phase-locked loop to receive the first  
    output signal of the fractional N synthesizer first voltage-controlled oscillator and to  
    control a second voltage-controlled oscillator to provide a second output signal having  
    a second frequency derived from the first frequency of the first output signal, wherein  
    the first and second output signals are provided respectively to first and second  
    mixers.
2. (Cancelled)
3. (Currently Amended) The apparatus of claim 1, wherein the second frequency of the  
    second output signal is substantially similar to the first frequency of the first output  
    signal.
4. (Cancelled)
5. (Cancelled)
6. (Currently Amended) The apparatus of claim ~~[[4]]~~ 1, further comprising an oscillator to  
    provide a fundamental frequency to the ~~[[first]]~~ fractional N synthesizer.

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7. (Original) The apparatus of claim 6 wherein the oscillator includes a crystal oscillator.
8. (Currently Amended) A method comprising:  
generating by a ~~first~~ an integer divider synthesizer an output signal having a frequency derived from an input signal having a desired frequency generated by a ~~second~~ fractional N synthesizer; and  
providing said output signal and said input signal to a first mixer and a second mixer, respectively.
9. (Cancelled)
10. (Cancelled)
11. (Original) The method of claim 8 comprising:  
generating the input signal and the output signal from a signal having a fundamental frequency.
12. (Currently Amended) An apparatus comprising:  
a first phase locked loop to set a first frequency of a first output signal of a first voltage controlled oscillator using a fractional N synthesizer to derive said first frequency from an input frequency;  
a second phase locked loop to receive the output signal of the first voltage controlled oscillator and to control a second voltage controlled oscillator to provide a second output signal having a second frequency derived from the first frequency using an integer divider synthesizer ~~the first output signal;~~ and  
a transceiver having first and second mixers operably coupled to the first and second voltage controlled oscillators respectively and able to transmit and receive signals by at least two dipole antennas.

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13. (Cancelled)

14. (Original) The apparatus of claim 12, wherein the frequency of the second output signal is substantially similar to the frequency of the first output signal.

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Currently Amended) A wireless communication system comprising:

a mobile station having a dual output synthesizer, which includes:

a first phase locked loop to set a first frequency of a first output signal of a first voltage controlled oscillator using a fractional N synthesizer to derive said first frequency from an input frequency;

a second phase locked loop to receive the output signal of the first voltage controlled oscillator and to control a second voltage controlled oscillator to provide a second output signal having a second frequency derived from the first frequency using an integer divider synthesizer ~~the first output signal;~~ and

a transceiver having first and second mixers operably coupled to the first and second voltage controlled oscillators respectively and able to transmit and receive signals by at least two dipole antennas.

19. (Cancelled)

20. (Original) The wireless communication system of claim 18, wherein the frequency of the second output signal is substantially similar to the frequency of the first output signal.

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21. (Cancelled)

22. (Cancelled)

23. (Original) The wireless communication system of claim 18, comprising a base station of a cellular communication system.

24. (Original) The wireless communication system of claim 18, wherein at least one antenna of the two or more antennas is an internal antenna.